

S/N 09/607,096  
YOR920000431US1

### REMARKS

Entry of this Amendment is proper under 37 CFR §1.116 since no new claims or issues are raised and because the Examiner will have to explain her position on the record prior to proceeding to Appeal, since, as explained below, the rejection currently of record is inherently inconsistent, includes at least one *non sequitur* reasoning step, and fails to heed the plain meaning of the language of the claims and the engineering reality of the primary reference Lee.

Claims 1-5 and 7-11 are all the claims presently pending in the application. Claim 6 has been canceled by reason of its incorporation into claim 1.

It is noted that the claims have been amended solely to more particularly point out Applicant's invention for the Examiner, and not for distinguishing over the prior art, narrowing the claim in view of the prior art, or for statutory requirements directed to patentability.

It is further noted that, notwithstanding any claim amendments made herein, Applicant's intent is to encompass equivalents of all claim elements, even if amended herein or later during prosecution.

Claims 1-11 stand rejected under 35 U.S.C. §103(a) as unpatentable over US Patent 5,712,985 to Lee, et al., further in view of article written by C. Emert.

This rejection is respectfully traversed in view of the following discussion.

### **L THE CLAIMED INVENTION**

Applicant's invention, as defined for example in independent claim 1, and substantially similarly in independent claims 9 and 10, is directed to a method suitable for projecting demand, including identifying a first set of merchandise and specifying a second set of merchandise which is to be used as a referent for soliciting information relative to demand behavior for a pre-determined attribute of the first set of merchandise. The second set of merchandise is clustered for generating a demand profile for the pre-determined attribute of the first set of merchandise by utilizing a clustering algorithm which partitions said second set into non-overlapping clusters with similar size profiles. The second set of merchandise is clustered for generating a demand model correlated to model-based demand attributes of the first set of

S/N 09/607,096  
YOR920000431US1

merchandise. The generated demand profile and the generated demand model are combined into a single encompassing model which is capable of projecting demand of the first set of merchandise.

At least one of the clustering for generating a demand profile, the clustering for generating a demand model, and the combining the generated demand profile and generated demand model are executed on a computer CPU.

An exemplary configuration of the method for projecting demand is shown in Figure 1 of the application.

The conventional systems, such as those discussed below and in the Related Art section of the present application, do not have such a structure, and fail to provide for such an operation.

Indeed, such features are clearly not taught or suggested by the cited references.

## **II. THE PRIOR ART REJECTION**

The Examiner alleges US Patent 5,712,985 to Lee et al., further in view of what appears to be a brief marketing article by Emert, entitled "Gap Sizzles San Francisco apparel retailer out-markets the high-tech firms", somehow renders obvious the present invention defined by all the pending claims.

Prior to Appeal, Applicants again disagree, but, rather than merely repeat the Applicants' arguments in the Amendment filed on August 6, 2004, the following response is organized in view of the Examiner's responses to arguments, as found beginning in Paragraph 2 on page 2 of the Office Action dated November 5, 2004.

### **APPLICANTS' RESPONSE TO THE EXAMINER'S RESPONSE TO ARGUMENTS ON PAGE 2 OF THE OFFICE ACTION**

**In Paragraph 2** of page 2, the Examiner alleges that the claim language fails to describe the condition "... using one item to project demand for a second item".

Although Applicants consider that this point is not particularly significant in the prior art analysis, Applicants respectfully disagree with the Examiner's position, since the independent

S/N 09/607,096  
YOR920000431US1

claims clearly describe using a "second set of merchandise ... to be used as a referent for soliciting information relative to demand behavior for a pre-determined attribute of said first set of merchandise...." Applicants submit that a "set of merchandise" includes a specific case in which the set includes a single item of merchandise, so that the claims do indeed include this situation.

More important, the Examiner seems to continue to fail to recognize the significance of this novel technique of the present invention relative to the prior art of record. That is, one of the purposes of this technique used in the present invention is to overcome the problem of sparse data for the first set of merchandise (e.g., see third paragraph on page 2 of Application).

The Examiner fails to recognize that Lee expressly teaches an entirely different method to overcome this problem of sparse (e.g., "incomplete") data. As clearly described in lines 15-30 of column 2, Lee expressly states that the current methods of addressing this incomplete data problem are inadequate. The two methods described therein include:

1. Taking a positive or negative percentage of the trend of the just-completed periods against projected periods and applying it to the remaining projected near-future intervals (lines 15-19); and
2. Updating the projected demand in the future intervals based on the recent variations between projected demand and actual demand (lines 22-26).

Lee specifically rejects both these conventional methods as being either unreliable (lines 20-22) or for failing to capture the variations in demand as they occur (lines 27-30).

Rather, Lee's solution to this problem of incomplete data, as compounded by complexity of influencing factors (line 56 of column 1 through line 8 of column 2) is described in summary between line 63 of column 2 through column 3, as follows:

1. Develop three profiles for each item: a base profile, at least one influence profile, and a forecast profile (lines 8 - 53 of column 3); and
2. After each forecast period, the base profile and the influence profile are updated to reflect actual demand (lines 54-64 of column 3) to provide a more accurate forecasted profile.

Applicants submit that none of these methods discussed in Lee to overcome the problem of incomplete data even suggests using data from a second set (or even a single item) to develop a model for demand for a first set (or single item).

S/N 09/607,096  
YOR920000431US1

Indeed, Lee very clearly teaches against the method of the present invention in which a second set of merchandise is used to develop a model for a first set of merchandise by expressly teaching that each business item has its own set of profiles (line 16, 29, 42 of column 3). There is no suggestion whatsoever in Lee to use a profile from a first item to be used for a second item.

The Examiner's prior art analysis cannot simply ignore the engineering reality of the technique taught in Lee that teaches against the claimed method (see MPEP §2141.02) or change the principle of operation of that primary reference (see MPEP §2143.01).

Therefore, as noted in the previous Amendment, Lee cannot even be used as the primary reference in the prior art analysis of the present invention, since it clearly teaches against the claimed invention and its modification to conform to the claimed invention would change its principle of operation.

**In Paragraph 3** of Page 2 of the Office Action, the Examiner alleges that Lee teaches "clustering" by its use of profiles. The Examiner is understood as considering that "cluster" means "to collect into a cluster" and that this concept is equivalent to "grouping data". The Examiner then considers that the "profiles" in Lee are "groups".

Although, the concept of "clustering" might arguably be reasonably described by the terminology "grouping data", Applicants traverse that the Examiner's position that the "profiles" in Lee are equivalent to "groups", since the dictionary definition of "profile" does not confirm the Examiner's interpretation. That is, as defined in, for example, Webster's Universal College Dictionary, 1997 Edition, the closest definition of "profile" consistent with its use in Lee would be: "a verbal, arithmetical, or graphic summary of a process, activity, or set of characteristics."

It would seem that there is only one alternate definition that might be close to the Examiner's intention of equating "profile" with "group" (e.g., "a set of characteristics or qualities that identify a type or category of person or thing"). However, not even this definition confirms the Examiner's position, since the definition clearly describes that the profile is the "set" of these characteristics or qualities.

Moreover, it is submitted that the Examiner's final statement in Paragraph 3 is clearly inconsistent with the definition of "profile" by alleging that profiles are "groups of data", since Lee fails in any way to describe the profiles as having been obtained by somehow grouping data.

S/N 09/607,096  
YOR920000431US1

Instead, the description for the "base profile" beginning at line 36 of column 6 clearly describes "... a historical exponentially smoothed average of actual demand for the item in each of a variable number of time intervals" (lines 38-41, 57-59).

There is clearly no "grouping of data" in the development of this base profile used in Lee.

It is also noted that the Examiner's position in Paragraph 3 contradicts her position in the actual rejection, wherein (see final paragraph on page 4 of the Office Action) the Examiner concedes that clustering is not used in Lee.

**In Paragraph 4** on page 2 of the Office Action, the Examiner is understood as relying upon the Emert article as demonstrating that demand forecasting is used.

In response, Applicants note on the record that the Examiner's point in this paragraph is uncertain at best. It is already clear from Lee that demand forecasting is used in the art.

That is, a key disputed issue of the prior art evaluation currently of record is whether Lee teaches the same method as that defined by the claimed invention to overcome the problem of scarcity of data for making that demand forecasting. Clearly, as described above, Lee teaches treating each item separately, wherein each item has its own three profiles. There is no suggestion whatsoever to use one item's profile to be the profile for a second item.

**APPLICANTS' ADDITIONAL COMMENTS ON THE DEFICIENCIES OF THE REJECTION CURRENTLY OF RECORD**

Relative to claim 1, the Examiner concedes that no second set of merchandise is used in Lee and that clustering is not used in Lee. To overcome these two deficiencies, the Examiner is understood as relying upon the Emert marketing article.

As best understood, the Examiner's reasoning to allege that Emert overcomes these two deficiencies of Lee is that because Emert teaches that "... apparel companies use demand forecasting to ensure they are carrying the right quantities, sizes and colors. Therefore, since Lee teaches using profiles that show actual demand quantities, it would have been obvious to one of ordinary skill in the art to use attributes such as size or color for an item to project a demand forecast for other items to ensure the most accurate levels of inventory are stocked to fulfill the

S/N 09/607,096  
YOR920000431US1

demand for that item. If it is found that a size is selling well in skirts, one could project a future demand of that size in shorts or other pants - leading to the conclusion that most consumers at that establishment are a certain size."

In response, Applicants submit that this reasoning has several underlying faults.

First, the above reasoning is a *non sequitur*, in that the inferences and/or conclusions do not follow from the premises. That is, it cannot reasonably be maintained that Emert, by merely demonstrating that the premise ("... apparel companies use demand forecasting to ensure they are carrying the right quantities, sizes and colors") leads to the inference that one of ordinary skill would, therefore, "... use attributes such as size or color for an item to project a demand forecast for other items."

It is noted that Emert provides no details whatsoever as to how demand forecasting is achieved by Gap of San Francisco. It is the Examiner, not Emert, who speculates that attributes of a first item are used for demand forecasting of a second item.

Second, although not particularly relevant to the present analysis, it is submitted that the Examiner's conclusion that, given the premise that a size is selling well in skirts, one would then consider that the same size would apply to shorts or other pants. Applicants submit that there is no way to make such conclusion without knowing more facts. That is, unless one is also given such additional facts that skirts, shorts, and pants are concurrently seasonable and concurrently in style, the mere fact that one size sells today for skirts does not mean that this same size will sell today for shorts and pants. Nor does knowing that the size of customers for skirts imply that the same customers purchasing skirts will return to the same store for shorts and pants.

Moreover, it is submitted that the Examiner's conclusion that, if the same sizes are sold for skirts, shorts, and pants, then it can be concluded that "most consumers at that establishment are a certain size" is also not necessarily true, unless it is also given that the number of skirts, shorts, and pants sold of these sizes is larger than the number of articles sold of other sizes.

Nor is this conclusion even relevant to the prior art analysis, since this conclusion that one can surmise that "most consumers at that establishment are a certain size" is not what is being defined in claim 1.

S/N 09/607,096  
YOR920000431US1

Nor, it is submitted, does either this conclusion or, for that matter, Emert add value to the objective analysis of the primary reference Lee, since Lee clearly teaches using a method in which each item has its own set of three profiles.

Hence, turning to the clear language of the claim, in neither Lee nor Emert, there is no teaching or suggestion of: "... method suitable for projecting demand, the method comprising: (i) identifying a first set of merchandise; (ii) specifying a second set of merchandise which is to be used as a referent for soliciting information relative to demand behavior for a pre- determined attribute of said first set of merchandise; (iii) clustering the second set of merchandise for generating a demand profile for said pre-determined attribute of said first set of merchandise by utilizing a clustering algorithm which partitions said second set into non-overlapping clusters with similar size profiles; (iv) clustering the second set of merchandise for generating a demand model correlated to model-based demand attributes of said first set of merchandise; and (v) combining the demand profile and the demand model into a single encompassing model which is capable of projecting demand of the first set of merchandise....", as required by claim 1.

**Relative to claims 2, 3, 6, and 8**, the Examiner invokes Official Notice. Applicants respectfully request that the Examiner provide a properly combinable with Lee that demonstrates her position.

For the reasons stated above, the claimed invention is fully patentable over the cited reference.

Further, the other prior art of record has been reviewed, but it too, even in combination with Lee or Emert, fails to teach or suggest the claimed invention.

### III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1-5, 7-11, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

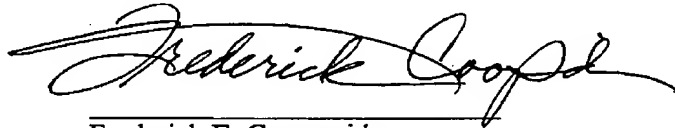
S/N 09/607,096  
YOR920000431US1

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully Submitted,

Date: 1/5/05

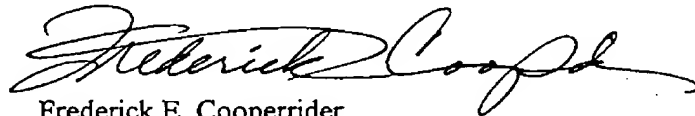


Frederick E. Cooperrider  
Reg. No. 36,769

**McGinn & Gibb, PLLC**  
Intellectual Property Law  
8321 Old Courthouse Road, Suite 200  
Vienna, VA 22182-3817  
(703) 761-4100  
Customer No. 21254

CERTIFICATION OF TRANSMISSION

I certify that I transmitted via facsimile to (703) 872-9306 this Amendment under 37 CFR §1.116 to Examiner J. Stimpak on January 5, 2005.



Frederick E. Cooperrider  
Reg. No. 36,769